

What Is Claimed Is

1 1. An LCD monitor, comprising:
2 a circuit device, forming plural electrodes on one side
3 thereof;
4 plural bumps, respectively forming on the electrodes;
5 a substrate, forming plural pads in accordance with the
6 bumps;
7 a means of connection, comprising a plurality of conductive
8 particles, conducting the bumps and the pads with the
9 conductive particles bonded between; and
10 a barrier structure forming on the side of the circuit
11 device, separating the conductive particles.

1 2. The LCD monitor of Claim 1, wherein the barrier structure
2 is made by an isolating material.

1 3. The LCD monitor of Claim 2, wherein the pads include
2 plural first pads and second pads, wherein the first pads are
3 input terminals of the LCD monitor, and the second pads are
4 output terminals of the LCD monitor.

1 4. The LCD monitor of Claim 3, wherein the barrier structure
2 is comprised of a first barrier rib extending along a first
3 direction, whereby forming a partition between the bumps
4 corresponding to the first pads.

1 5. The LCD monitor of Claim 4, wherein the barrier structure
2 is further comprised of a second barrier rib extending along
3 the first direction, forming a partition between the bumps
4 corresponding to the second pads.

1 6. The LCD monitor of Claim 5, wherein the barrier rib is
2 further comprised of a third barrier rib extending along a

3 second direction, forming a partition between the bumps
4 corresponding to the first and the second pads.

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1 7. The LCD monitor of Claim 6, wherein the first and the
2 third barrier ribs are connected, forming an L-shaped
3 structure.

1 8. The LCD monitor of Claim 6, wherein the first and the
2 third barrier ribs are connected, forming a T-shaped structure.

1 9. The LCD monitor of Claim 6, wherein the second and the
2 third barrier ribs are connected, whereby forming a L-shape
3 structure.

1 10. The LCD monitor of Claim 6, wherein the second and the
2 third barrier ribs are connected, forming a T-shaped structure.

1 11. The LCD monitor of Claim 2, wherein the isolating
2 material is polyimide (PI).

1 12. The LCD monitor of Claim 2, wherein the connecting means
2 is an anisotropic conductive film.

1 13. The LCD monitor of Claim 2, wherein the bump is made
2 of one metal selected from the group consisting of Au, Cu, Ni,
3 and Zn.

1 14. The LCD monitor of Claim 2, wherein the substrate is
2 made by glass.

1 15. The LCD monitor of Claim 2, wherein the circuit device
2 is an integrated circuit.

1 16. The LCD monitor of Claim 2, wherein the circuit device
2 is a flexible printed circuit.

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1 17. A semiconductor device, comprising:
2 an electrode formed on a base surface;
3 a bump formed on the electrode;
4 a pad;
5 a connecting means, comprising a plurality of conductive
6 particles, whereby conducting the bump and the pad with the
7 conductive particles bonded between; and
8 a barrier rib forming on the base surface, separating the
9 conductive particles.

1 18. The semiconductor device of Claim 17, wherein the
2 barrier rib is made by an isolating material;

3 the pad is further comprised of plural first pads and second
4 pads, wherein the first pads are input terminals of a LCD
5 monitor, and the second pads are output terminals of the LCD
6 monitor;

7 the barrier rib is further comprised of a first barrier rib
8 extending along a first direction, separating the conductive
9 particles between the first pads;

10 the barrier rib is further comprised of a second barrier
11 rib extending along the first direction, separating the
12 conductive particles between the second pads; and

13 the barrier rib is further comprised of a third barrier rib
14 extending along a second direction, separating the conductive
15 particles between the first and the second pads.

1 19. The semiconductor device of Claim 18, wherein the first
2 and the second barrier rib are respectively connected to the
3 third barrier rib, forming an L-shaped structure.

1 20. The semiconductor device of Claim 18, wherein the first
2 and the second barrier ribs are respectively connected to the
3 third barrier rib, forming a T-shaped structure.

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1 21. The semiconductor device of Claim 18, wherein the
2 isolating material is polyimide;
3 the connecting means is an anisotropic conductive film; and
4 the bump is made by one metal selected from the group
5 consisting of AU, Cu, Ni, and Zn.

1 22. A method for making a semiconductor device, comprising
2 the steps of:

3 providing a circuit device, wherein the circuit device is
4 formed with plural electrodes on one side thereof;

5 forming a protective layer on the side of the circuit device
6 with the electrodes exposed;

7 forming plural bumps on the protective layer in accordance
8 with the electrodes, and conducting the electrodes and the
9 bumps; and

10 forming plural barrier ribs on the side of the circuit
11 device, thereby separating the bumps.